

SHAW PITTMAN  
POTTS & TROWBRIDGE  
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

2300 N Street, N.W.  
Washington, D.C. 20037-1128  
202.663.8000  
Facsimile 202.663.8007

JILL ABESHOUSE STERN, P.C.  
202.663.8380  
jill\_stern@shawpittman.com

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1675 Broadway  
New York, NY 10019-5820

December 8, 1997

Mr. William Caton  
Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

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DEC 8 - 1997

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

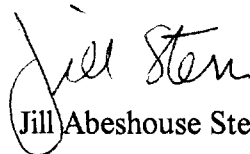
**Re: Amendment of the Commission's Rules to Incorporate  
Mobile Earth Station Out-of-Band Emission Limits (RM No. 9165)**

Dear Mr. Caton:

On behalf of Mobile Communications Holdings, Inc., I am transmitting herewith an original and four copies of its "Statement In Partial Support of NTIA Rulemaking Petition" with respect to the above-referenced matter.

Should there be any questions concerning this matter, kindly communicate with the undersigned.

Sincerely,

  
Jill Abeshouse Stern

O&Y  
MMB

**BEFORE THE**  
**Federal Communications Commission**  
**WASHINGTON, D.C. 20554**

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**DEC 8 - 1997**

**FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY**

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	RM No. 9165
to Incorporate Mobile Earth Station	)	
Out-of-Band Emission Limits	)	

**STATEMENT IN PARTIAL SUPPORT OF  
NTIA RULEMAKING PETITION**

Mobile Communications Holdings, Inc. (MCHI), by its attorneys and pursuant to Section 1.405 of the Commission's rules, hereby submits a statement in partial support of the petition for rulemaking filed by the National Telecommunications and Information Administration (NTIA) on September 19, 1997 in which NTIA seeks adoption of out-of-band emission limits for mobile earth terminals in the 1.6 GHz band.<sup>1</sup> As more fully discussed below, while MCHI believes that rulemaking is warranted, the Commission is urged to invite further comment and analysis with respect to the need for emission limits and the appropriate limits before reversing its prior decisions, reached in 1994 and 1996, not to adopt out-of-band emission limits to protect GLONASS operations below 1610 MHz.<sup>2</sup>

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<sup>1</sup> FCC Public Notice, Report No. 2227, September 23, 1997.

<sup>2</sup> See Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, *Report and Order*, 9 FCC Rcd 5936,5989, para. 137 (hereinafter cited as "Big LEO Order"). See also Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile

## **I. BACKGROUND**

On September 19, 1997, NTIA submitted a letter, dated September 18, 1997, to the Federal Communications Commission (FCC) in which NTIA proposed a time-phased approach to protect GLONASS from out-of-band emissions from mobile earth terminals (METs) operating in the 1.6 GHz band. With respect to METs operating in the 1610-1626.5 MHz band, NTIA has proposed a -70 dBW/MHz limit on wide band signals which must be met by (a) January 1, 2002 (for terminals commissioned for use after that date) or (b) January 1, 2005 (for terminals commissioned for use before January 1, 2002). Terminals commissioned for use prior to January 1, 2002 would be permitted to meet a less restrictive standard (-64 dBW/MHz) until January 1, 2005, after which date existing equipment would be required to be brought into compliance with the -70 dBW standard or deactivated.

NTIA's proposal represents the culmination of various government/industry discussions relating to GLONASS that have occurred over the past year, primarily in connection with the ITU Radiocommunication Study Groups, specifically Study Group 8, and RTCA Working Group SC159. A draft recommendation with respect to GLONASS protection has been adopted by ITU Study Group 8 and is now being circulated for approval by Member States. The ITU recommendation incorporates the -70 dBW standard, although some countries had sought a less restrictive standard. Significantly, however, the ITU recommendation recommends that appropriate studies be undertaken

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Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, *Memorandum Opinion and Order*, 11 FCC Rcd 12861 (1996)(hereinafter cited as "Big LEO Reconsideration Order").

during the 1997-1999 study period and the final e.i.r.p. recommendation modified as appropriate based on these studies.

As a licensee authorized to construct a Low Earth Orbit (LEO) mobile satellite system capable of operating in the 1610-1626.5/2483.5-2500 MHz frequency bands,<sup>3</sup> MCHI has participated actively in the Big LEO licensing and rulemaking processes, and related ITU activities including Study Group 8. During the Study Group process, it is fair to say that there was strong disagreement within the United States (and between the United States and other countries) as to the appropriate MET limitations for GLONASS protection. As a general matter, some of the U.S. mobile satellite operators endorsed a less restrictive standard, believing that an emission limit of -50 dBW or even -63 dBW would be more than adequate to protect GLONASS. In contrast, the FAA and the Russians argued for a higher level of GLONASS protection (-80 dBW). However, other countries, including France, proposed lower emission limits than those ultimately reflected in the ITU recommendation.

In its September 18, 1997 letter to the FCC, NTIA indicated that, based upon “continued discussions with the FAA and interested MSS operators,” NTIA, FAA and Globalstar have “agreed to a time-phased approach” to emission limits on METs. MCHI was not a party to these discussions and, as discussed below, disagrees with NTIA’s implication that the proposed standard has been endorsed by all of the affected operators. MCHI has consistently opposed the FAA’s proposed -80 dBW standard in the ITU setting. Moreover, during informal meetings with NTIA, MCHI has indicated that the

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<sup>3</sup> See Mobile Communications Holdings, Inc., Order and Authorization, 12 FCC Rcd 9663 (1997).

proposed -70 dBW standard would have a significant detrimental impact upon the Big LEO systems, in terms of increased cost and size of the mobile terminals and diminished capacity. While MCHI has indicated that it will meet whatever standard may ultimately be adopted, it has previously raised concerns about the arbitrary nature of the proposed standard.

## **II. SUMMARY OF MCHI'S POSITION**

MCHI's position with respect to NTIA's rulemaking proposal can be summarized as follows. First, MCHI continues to be concerned that the emission limits proposed by NTIA are unduly and disproportionately restrictive, particularly in light of the continuing uncertainty with respect to GLONASS and its role in the Global Navigation Satellite System (GNSS). As discussed below, while the proposed standards can be met, compliance will exact a heavy price upon the U.S. systems in terms of increased terminal cost, shorter battery "talk time," greater MET size, as well as potentially diminished system capacity.

Second, MCHI agrees that the United States would benefit from a coordinated position on the GLONASS issue. To that end, MCHI supports open discussion about the relevant issues on the public record and initiation of a rulemaking proceeding to consider adoption of appropriate emission limits. Given the FCC's conclusions in 1994 and 1996, that out-of-band emission limits on Big LEO terminals are inappropriate, a complete discussion, on the record, of the rationale and assumptions underlying NTIA's proposal would serve the public interest.

### **III. MCHI SUPPORTS RULEMAKING TO CONSIDER ADOPTION OF APPROPRIATE EMISSION LIMITS**

As a general matter, MCHI supports initiation of a rulemaking proceeding to consider what out-of-band emission limits are appropriate for METs operating in the 1610-1626.5 MHz band. A rulemaking proceeding will allow consideration on the record of the relevant technical issues, as well as the justification for particular emission limits. Consideration in the context of an administrative rulemaking, with the associated procedural safeguards, is particularly important given the, perhaps, undue deference to FAA and ICAO views in the RTCA and ITU Study Group process.

In the 1996 Big LEO Reconsideration Order, the Commission concluded that “there [was] no date certain” by which GLONASS would be “incorporated into or accepted as part of the global navigation satellite system for aeronautical navigation either domestically or through the International Civil Aviation Organization.”<sup>4</sup> Due to uncertainty surrounding the deployment and acceptance of the GLONASS system as an integrated component of the GNSS, in 1996 the Commission concluded that “no interim protection of GLONASS is necessary in the United States.”<sup>5</sup> Contrary to the Commission’s conclusions, the FAA and ICAO have been actively pursuing, in the ITU and RTCA setting, adoption of stringent out-of-band emission limits for the protection of

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<sup>4</sup> Big LEO Reconsideration Order at 12865 (¶14) (1996). See also Big LEO Order at paras. 134-137.

<sup>5</sup> Big LEO Reconsideration Order at 12865-66, ¶14. It is MCHI’s current understanding that GLONASS requires 18 operational satellites for two-dimensional position coverage. See “GLONASS Issues Remain Unresolved,” *GPS World* (March 1997) at 14. Currently, there are only 14-15 operational GLONASS satellites. Ongoing delays in launching the three additional required satellites suggests that GLONASS may not be a high priority within the Russian space program. This underscores the prematurity of any U.S. rules based upon assumptions about the use of GLONASS.

GLONASS. As a result of this activity, a recommendation has been adopted at the ITU without a balanced consideration of this issue within the United States.

As discussed above, MCHI questions whether the restrictive emission limits proposed by NTIA are appropriate absent any showing by NTIA or other parties that sufficient grounds exist to revisit the conclusions reached by the FCC in February 1996 that no limits are appropriate.<sup>6</sup> Nonetheless, MCHI believes that there is a benefit to a full ventilation of the underlying facts surrounding the GLONASS issue. By developing a public record, it will be possible to consider such issues as (1) whether emission limits should be adopted pending further clarification with respect to GLONASS' status and its incorporation into the Global Navigation System; (2) what emission limits are appropriate; (3) what adverse impact particular emission limits will have upon the development of the U.S. Big LEO systems; and (4) whether such impact is warranted in light of the uncertainty surrounding GLONASS at this point in time and the fact that other MSS systems (i.e., ICO) are not similarly constrained.

Separately, but in parallel with the rulemaking process, the FCC should make a determination regarding the factual situation with respect to GLONASS, the likelihood that it will come into service and when, if ever, this will happen.

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<sup>6</sup> As a general rule, the Commission has the right to reject petitions for rulemaking which fail to raise new grounds sufficient to persuade the Commission to alter conclusions reached in previous rulemakings. *See, e.g., National Exchange Carrier Association, Inc.*, 11 FCC Rcd 16504, 16509 (1996). *See also* Commission Rule 1.401(e).

#### **IV. IF THERE IS TO BE A STANDARD, IT SHOULD BE A REASONABLE ONE; MCHI SUPPORTS -63 dBW**

The potential impact of the proposed -70 dBW emission limit has been considered by MCHI's technology partners responsible for the CDMA signal processing, Lockheed Martin and L-3 Communications Corporation. It was concluded that through wave form shaping, careful selection and operating point of the final power amplifier plus appropriate output filtering, -70 dBW/MHz could be met. However, as noted previously, this will impact both the cost, size and battery life of the terminal, potentially making it less competitive with other MSS terminals (e.g., ICO) which are not required to meet this out-of-band emission limit.

MCHI has previously indicated that it will take appropriate steps to meet whatever standard may ultimately be adopted (preferably after full and fair consideration of the related issues.) However, MCHI questions the need to incorporate overly restrictive emission limits given (i) the current uncertainty with respect to GLONASS, (ii) a difference of opinion between technical experts as to whether a -70 dBW standard is necessary to protect GLONASS or whether a lower level of protection will be adequate; and (iii) the acknowledgement, even within the ITU recommendation, that continued study of the associated issues during the 1997-1999 time frame is necessary.

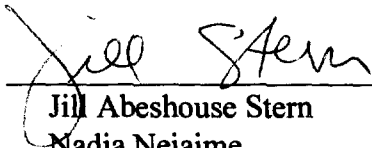
Moreover, MCHI notes that, as a practical matter, the time-phased approach proposed by NTIA will offer no meaningful relief to MSS operators. Due to the costs of recalling, deactivating or modifying terminals after 2005, it is likely that all terminals will be developed to meet the -70 dBW emission limits at an early stage.

## V. CONCLUSION

For the foregoing reasons, MCHI supports initiation of a rulemaking proceeding to consider adoption of appropriate emission limits for protection of GLONASS in accordance with the views expressed herein.

Respectfully submitted,

MOBILE COMMUNICATIONS  
HOLDINGS, INC.

By:   
Jill Abeshouse Stern  
Nadia Nejaime  
Shaw Pittman Potts &  
Trowbridge  
2300 N Street, N.W.  
Washington, D.C. 20037-1128  
(202) 663-8380

Its Attorneys

December 8, 1997

## **CERTIFICATE OF SERVICE**

I, Seaneth Simon, hereby certify that on this 8th day of December 1997, a true and accurate copy of the foregoing document was served by first-class mail, postage pre-paid, or hand-delivery, on the following persons:

\*Regina Keeney  
Chief, International Bureau  
Federal Communications Commission  
2000 M Street, N.W., Room 800  
Washington, D.C. 20554

\*Thomas Tycz  
Chief, Satellite & Radiocommunication Division  
International Bureau  
Federal Communications Commission  
2000 M Street, N.W., Room 520  
Washington, D.C. 20554

\*Fern J. Jarmulnek, Chief  
Satellite Policy Branch  
Satellite & Radiocommunications Division  
Federal Communications Commission  
2000 M Street, N.W., Room 518  
Washington, D.C. 20554

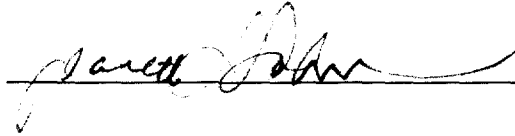
\*Karl Kensinger  
Federal Communications Commission  
2000 M Street, N.W.  
Washington, D.C. 20554

\*Harold Ng  
Federal Communications Commission  
2000 M Street, N.W.  
Room 512  
Washington, D.C. 20554

**\*Richard Parlow**  
Associate Administrator  
Spectrum Management  
Commerce Department  
1401 Constitution Avenue, N.W., Room 4099  
Washington, D.C. 20230

Bruce A. Henoeh  
COMSAT Corporation  
6560 Rock Spring Drive  
Bethesda, Maryland 20817

Bruce D. Jacobs  
Glenn S. Richards  
Fisher Wayland Cooper Leader  
& Zaragoza L.L.P.  
2001 Pennsylvania Ave., N.W.  
Suite 400  
Washington, D.C. 20006

A handwritten signature in dark ink, appearing to read "Richard Parlow", is written over a horizontal line.

**\*By Hand Delivery**